



Environmental Protection Agency

Small Business Innovation Research (SBIR) Program

Region 5 Small Business Veterans Conference
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ORD Science Liaison

Federal SBIR Program



- ◆ Set-aside program for small businesses to engage in federal R&D
- ◆ Promote commercialization
- ◆ Budget = 2.5 % of Federal R&D Budget
- ◆ Over \$ 2 Billion for all Agencies

Eligibility

- ◆ Organized for-profit business
- ◆ At least 51% U.S.-owned
- ◆ Located in the U.S.
- ◆ 500 or fewer employees

11 Participating Agencies

- ◆ Department of Defense (DOD)
- ◆ Department of Health & Human Services (HHS)
- ◆ National Aeronautics & Space Admin (NASA)
- ◆ Department of Energy (DOE)
- ◆ National Science Foundation (NSF)
- ◆ Department of Homeland Security (DHS)
- ◆ Department of Agriculture (USDA)
- ◆ Department of Commerce (DOC)
- ◆ **Environmental Protection Agency (EPA)**
- ◆ Department of Transportation (DOT)
- ◆ Department of Education (ED)

Mission



◆ EPA:

- Protect human health and the environment
 - air, water and land

◆ EPA SBIR:

- Develop and commercialize innovative environmental technologies needed by EPA regions, program offices and states

EPA SBIR Budget

- ◆ FY03 - \$6.8 million
- ◆ FY04 - \$6.6 million
- ◆ FY05 - \$6.2 million
- ◆ FY06 - \$6.5 million

EPA SBIR Awards

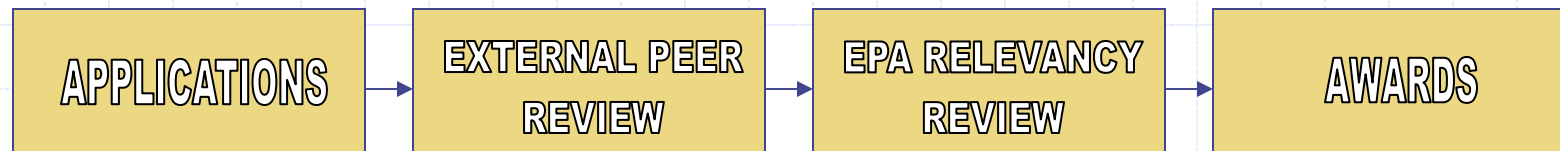
◆ Phase I

- Proof of Concept
- \$70,000
- 6 months

◆ Phase II

- Develop Phase I technology with focus on commercialization - \$225,000
- Up to \$345,000 (with options)
- 2 years

Proposal Evaluation and Selection



SBIR Schedule

- ◆ Estimated Phase I Solicitation for 2008
 - Opens Mid March – Closes Mid May 2008
 - Peer Review ~September 2008
- ◆ Relevancy Review ~December 2008
- ◆ Phase I Contracts Awarded ~February 2009
- ◆ Phase II Solicitation Open ~July 2009
- ◆ Phase II Contracts Awarded ~March 2010

External Peer Review

◆ Ratings:

- Excellent, Very Good, Good, Fair, Poor

◆ Five Criteria:

- Scientific/Technical Quality and Soundness
- Uniqueness and Originality
- Cost Effectiveness and Environmental Benefit
- Qualifications of Team
- Commercialization Potential

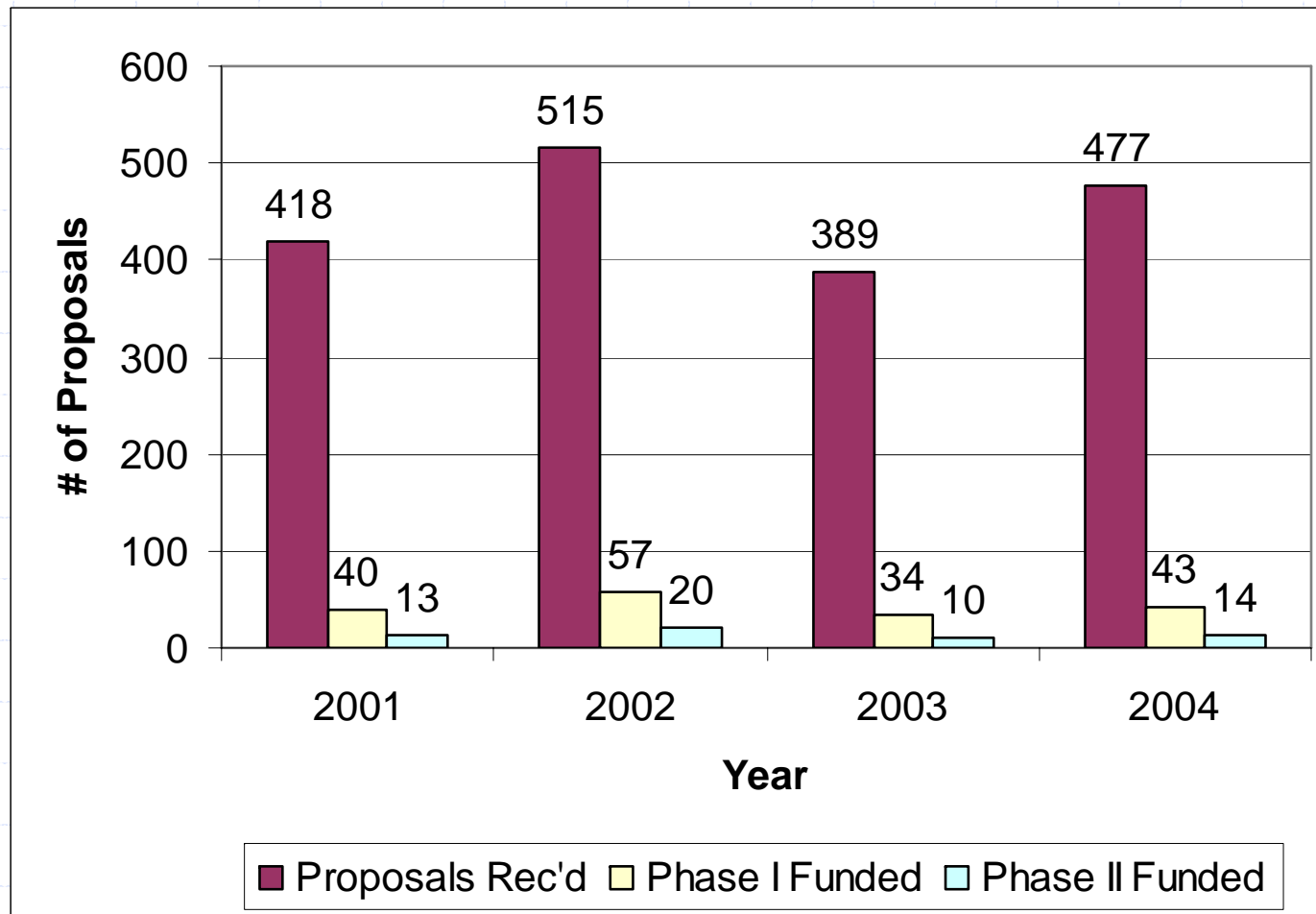
Internal Relevancy Review

- ◆ EPA Internal Programmatic Review
- ◆ Review only those proposals rated Excellent and Very Good
- ◆ Evaluate Proposals on 3 Criteria:
 - EPA Needs and Program Priorities
 - Significant Environmental Benefits
 - Broad Application and Impact

Successful Proposals

- ◆ Meet agency priority needs
- ◆ Quantify environmental benefits
- ◆ Demonstrate innovation
- ◆ Have a strong technical abstract
- ◆ Have a realistic work plan
- ◆ Address technical evaluation criteria
- ◆ Show relationship to future research
- ◆ Address cost
- ◆ Include letters of support

Success Rate



Solicitation Topics for 2007

- ◆ Regional Environmental Problems (EPA Regions 2, 4 and 6)
- ◆ Water Related Problems
- ◆ Remediation of Hazardous Waste Sites
- ◆ Air Pollution Control
- ◆ Pollution Prevention

Hazardous Waste

(Office of Solid Waste & Emergency Response)

- ◆ Waste Minimization
- ◆ Hazardous Waste Management
- ◆ Contaminated Waste Recycling
- ◆ Solid Waste Recycling
- ◆ Waste Gasification

Critical EPA Research Topics

- ◆ Innovation in Manufacturing
- ◆ Nanomaterials
- ◆ Pollution Prevention
- ◆ Water and Wastewater Management
- ◆ Green Buildings
- ◆ Safe Buildings
- ◆ Drinking Water and Wastewater Security
- ◆ Computational Toxicology
- ◆ Lead Paint Detection and Remediation

SBIR Success Story – Compact Membrane Systems

- ◆ High Gas Flux and Chemically Resistant Membranes
- ◆ Retrofit for diesel engines and generators
- ◆ Reduces NO_x emissions in diesel engines by 50%
- ◆ Will provide Region I with a solution to enforcement issue. Otherwise would fine polluters but no technology available to meet regulation



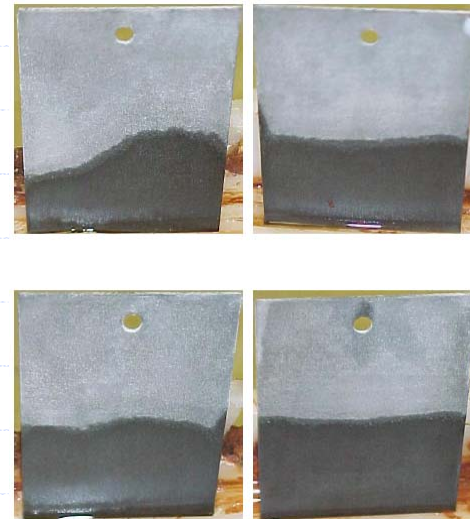
SBIR Success Story – National Recovery Technology

- ◆ Developed and Commercialized a polymer-based process for sorting postconsumer plastic containers.
- ◆ Allows for high throughputs needed for cost-effective recycling of municipal solid waste



SBIR Success Story – Lynntech, Inc.

- ◆ Developed environmentally friendly heteropolymolybdate-based conversion coating
- ◆ Does not contain toxic and carcinogenic chromates
- ◆ Exhibits same long term corrosion resistance as chromate coatings



EERGC Corporation

- ◆ Project: Use of Cow Manure for Fuel in Cement Kilns
- ◆ Focused on dairy farms in Chino Basin of Southern California
- ◆ Facility would be co-located

NanoScale Materials, Inc.

- ◆ Based in Manhattan, Kansas
- ◆ 2004 Phase I Project: Solvent Free Production of Alkaline Earth Metal Titanates for Electronics Applications
- ◆ Development, production and application of high performance nano-crystalline chemicals to produce barium, and strontium titanate materials in a more environmentally friendly way



Small Business Innovation Research

- ◆ Website www.epa.gov/ncer/sbir
- ◆ Contact Information
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